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F-35 Lightning II
Defining the Future





F-35C CV aircraft formation flight at Naval Air Station Patuxent River, Md.

Defining the Future

The latest chapter in Lockheed Martin's history of building the world's finest military aircraft – the F-35 Lightning II – brings together stealth, agility and lethality to deliver 5th generation capabilities to the United States and its allies for decades to come.

All variants – the conventional takeoff and landing (CTOL), short takeoff/vertical landing (STOVL) and carrier variant (CV) – are currently flying and will continue to fly for the next 40 years or more. With each flight hour and major milestone – including first flights, vertical landings and flights at supersonic speeds – pilots, maintainers and engineers learn more about the F-35 Lightning II. With unprecedented situational awareness, agility and interoperability, the F-35 is the centerpiece for 21st century global security.

The World's Only 5th Generation International Multirole Fighter

From defense of the homeland to the establishment of air dominance, the F-35 Lightning II defines the meaning of a 5th generation multirole stealth fighter.

Decisive Operational Advantage: All-aspect, advanced stealth enables the F-35 to dramatically reduce the detection and engagement ranges of enemy defense systems or aircraft. The F-35's shape, embedded antennas, aligned edges, internal weapons and fuel, and special coatings all contribute to its Very Low Observable (VLO) stealth capability.

Dominating the Skies: Next-generation avionics and sensor fusion give the pilot real-time access to battlefield information and an unparalleled ability to dominate the tactical environment. This unmatched situational awareness, along with the aircraft's extreme agility, acceleration and stealth, provides a tactical advantage over all adversary aircraft.

Joint Force Multiplier and Enabler: Embedded, network-enabled capability allows information gathered by F-35 sensors to be immediately shared with commanders at sea, in the air or on the ground for U.S. and coalition partners, providing an instantaneous, high-fidelity view of ongoing operations.



A 33rd Fighter Wing crew chief guides a F-35A CTOL jet arriving at Eglin Air Force Base, Fla., to support pilot and maintenance training.



The Autonomic Logistics Global Sustainment (ALGS) Operations Center monitors and supports all aircraft in the fleet.

F-35 Sustainment – Greater Reliability, Affordability and Enhanced Readiness

The F-35 establishes new levels of operational readiness through a fully integrated sustainment system and performance-based logistics environment. Aircraft share common parts, support equipment and technical data – producing greater reliability and economies of scale to yield long-term affordability. Parts requirements are anticipated and requisitioned quickly across the global supply chain, providing higher sortie generation rates and keeping aircraft mission ready.

Autonomic Logistics Information System

The Autonomic Logistics Information System (ALIS) – the infrastructure for data collection, data analysis and decision support – ties together F-35 operational planning, prognostics and health management to match customer metrics and resources in real time. F-35 sustainment is a total life-cycle system – a new paradigm for fighter aircraft support that dramatically streamlines maintenance and keeps the aircraft where it belongs – in the air, performing its mission.

The F-35 Lightning II Team

Lockheed Martin Aeronautics Company designs and manufactures the finest military aircraft in the world.

The company's innovation on the F-35 program is enhanced by an exceptional technology team.

Northrop Grumman provides strong support in sustainment, modeling, and simulation and mission planning.

BAE Systems is responsible for the fuel, crew escape, life-support, prognostics and health management system, and integration support of the F-35 aboard the U.K. future carrier.

Pratt & Whitney builds the F135 engine, which is physically and functionally interchangeable across all three F-35 variants.

Global Partnerships

Global partnerships and technological innovation are foundational to the F-35 program, which builds on existing aerospace industry capabilities, incorporates national strategic desires and offers sustained growth in technology, development, employment and profitability. These partnerships are leading to unprecedented technology transfer and innovation that is invaluable to the development of the F-35.

Innovative Production, Unparalleled Performance

The F-35's common manufacturing processes and parts, advanced digital design tools and assembly methods help achieve the program goals of affordability, quality and assembly speed. By incorporating lessons learned from development-aircraft production and using industry-standard engineering and manufacturing technologies to ensure precise and efficient assembly, the concurrent production of all three variants is steadily moving toward full-rate production.



The state-of-the-art production facility in Fort Worth, Texas.



The F-35C completes a steam catapult launch at Naval Air Systems Command, Lakehurst, N.J.